

**Description of take location: Pacific Ocean;
Territories and Commonwealth: Guam (GU), Mariana Islands (MP)**

The proposed research activities (composed of aerial and surface ship surveys, as well as recording devices mounted on the sea floor) of the take-location in the Pacific Ocean off the coast of the Mariana Island chain and Guam primarily aim to investigate the impact of anthropogenic sound in the ocean on marine mammal species including both mysticetes and odontocetes. The particular emphasis will be assessing the impact of noise generated by U.S. Navy operations, including mid-frequency active sonar, low-frequency active sonar, ordnance training, and vessel traffic on marine mammals.

These activities occur most often at designated instrumented training ranges and adjacent waters, but may also occur outside these ranges, for example in more broadly designated Navy operational areas (OPAREAS), military special use airspace complexes, or any of the waters under the responsibility of Naval Facilities Engineering Command Pacific (NAVFAC Pacific). Therefore, although these OPAREAS and airspace complexes in sum cover relatively large areas, we have designated the majority of these as potential take locations due to the focus and purpose of our intended research under the U.S. Navy's election to consolidate ESA and MMPA compliance efforts under a recent "indefinite delivery, indefinite quantity" (IDIQ) request for quotes (RFQ) (see attached). The OPAREAS and airspace complexes include the Marianas Complex.

Regarding time specificity, the research is planned to be performed: during active U.S. Navy and military exercises, immediately before and after such exercises, as well as during inactive periods between exercises.

Abundance research covering Hawaiian waters (Central North Pacific) were deemed roughly equivalent to the waters of Guam and the Marianas for the purposes of computing expected take numbers, with some exceptions such as the addition of species with known Western North Pacific stocks that are not observed in Hawaiian waters. Annual expected take numbers expected for incidental harassment in this region over the five year life of the permit were computed for each species from the total number of sightings observed in 10-year aerial survey of the waters within 25 nautical miles (nmi) of the main populated Hawaiian islands (1993-03 Hawaiian Islands aerial surveys, Mobley, unpublished data; For 1993-98 see Mobley et al., 2000). These raw sighting figures were adjusted for the effort involved in the study relative to the effort expected in this region from the IDIQ RFQ (i.e., 40 hrs/yr aerial survey, and 15 hrs/yr ship survey). Because the aerial surveys usually occur below an altitude of 1000 ft. (304.8 m), and because the ship survey frequently require close approaches for species and group size identification, all sightings are considered takes. The final expected take figure was multiplied by a factor of 2.0 to attempt to account for variation in the sighting numbers, uncertainty within the computations, as well as potentially unexpected sighting numbers due to seasonal or sub-regional variations in abundance during the study periods. A minimum expected take figure of 50 was used.

For more information see:

1) Commander Navy Joint Region Marianas
<https://www.cnjc.navy.mil/Marianas/index.htm>

2) Commander Naval Base Guam
<http://www.cnjc.navy.mil/Guam/index.htm>

3) EIS links
<http://www.marianasrangecomplexeis.com/> (Marianas Range Complex)
<http://www.navy.mil/oceans/documents.html> (EIS & Marine Resource Assessment links)